28RTS-HE Series High Efficiency Water Boilers

Smith
CAST IRON BOILERS

Ease of Installation

For new construction or in existing structures, Smith Boilers has built generations of experience into saving time and effort during installation.

Efficiency [in both the short and long term]

Simplified installation and enduring performance are our hallmarks. When plans require an eye on value over time, and call for less hands-on operation and maintenance, Smith Boilers will get you there. Proven in decades past, proving it for decades to come.

Optimal Performance

Larger heat transfer surface and cast-in heat transfer pins allow for maximum thermal efficiency—during the course of its lifetime, the boiler pays for itself several times over. Additionally, our integral flue gas collector enables quieter operation.

Trouble-free Maintenance

Smith Boilers designs products with the needs of the contractor and end-user in mind. Easy access for service and maintenance provides a longer service life.

Design [in keeping with your vision]

An architect or specifying engineer can't control how effectively a boiler is assembled on site or how it will be maintained over time. That's OK—Smith Boilers has done that for you.

1. Machined Feet

Smith Boilers ship with their own steel floor rails that match section feet assembly; no need for shims or field adjustments. Sections are drawn together pair-by-pair to reduce stress for simplified, no-jack connection

2. Indestructible Port Connectors

Precise sectional alignment accommodates graphite port connectors that permanently withstand exposure to flue gases and water pressure up to 80 psi, and any water pH factor

3. Heat Transfer Rods

Deep sections and precision machining allow for the placement of heat transfer rods between sections to maximize thermal output

4. Continuous Seal/ Integral Smokehood

The exact alignment of the sections allows for a convenient continuous ceramic rope seal, as well as a cast-in smokehood in order to reduce the operational noise

RTS Return Temperature Stabilizer

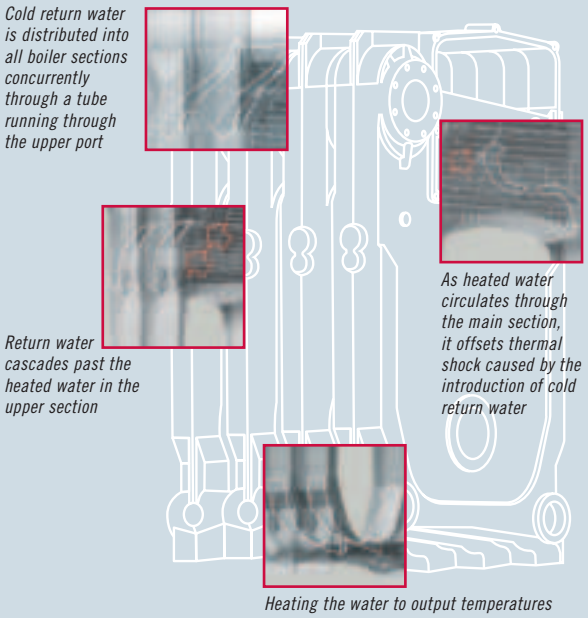
Return Temperature Stabilizer*

Preventing Service Calls & Extending Boiler Lifetime

Commercial applications cycle-off when a facility is unoccupied. Re-introducing cold water causes uneven boiler expansion/contraction. This material stress can lead to failure. Smith Boilers's flexible iron in combination with our Return Temperature Stabilizer equalize water temperatures to minimize stress and extend boiler life.

- no blend pumps
- no manual or thermostatic by-pass
- no additional controls
- self-modulating, no adjustments needed
- simple installation

*Patent pending


Cold return water is distributed into all boiler sections concurrently through a tube running through the upper port
Return water cascades past the heated water in the upper section
As heated water circulates through the main section, it offsets thermal shock caused by the introduction of cold return water
Heating the water to output temperatures is accelerated and tempered through each section

28RTS-HE Series

HIGH EFFICIENCY WATER BOILERS

RTS Standard Equipment

- Cast iron wet-base sections
- Stainless steel Return Temperature Stabilizer
- Insulated metal jacket
- Cast iron smokehood with integral damper
- Intregal flue gas collector
- Burner mounting plate with insulation block
- Front and rear flame observation ports
- Stack thermometer
- Steel angle floor rails
- Ceramic fiber rope seal between sections
- Graphite port connectors
- Low NOx available
- 80 psi working pressure sections
- ASME relief valve, 40 psi
- Theraltimeter
- Manual reset, Hi-Limit control (Boiler/Burner units only)
- Operating control (Boiler/Burner units only)

I B R Ratings, Burner Capacities and Dimensions (inches)

Designed and tested to the ASME boiler and pressure vessel code, section IV for maximum allowable working pressure, WATER 80 psig.

Boiler Model Number (Note 1)	Boiler Horse-power	I=B=R Gross Output (MBH)	Net I=B=R Ratings (Note 2)			Water Contents (Gals)	Boiler Jacket Length	Dia. Vent Conn.	Thermal Efficiency		Combustion Efficiency	
			Water	I=B=R Burner Capacity								
			MBH	Oil GPH (Note 3)	Gas MBH (Note 4)	Water			Oil	Gas	Oil	Gas
†28HE-W-4	27	931	810	7.9	1143	123.4	35	10	83.9	81.4	86.2	83.6
†28HE-W-5	35	1194	1038	10.2	1458	150.3	43	10	84.4	81.9	86.2	83.6
†28HE-W-6	43	1458	1268	12.2	1773	177.2	51	10	84.8	82.2	86.1	83.5
†28HE-W-7	51	1722	1497	14.4	2088	204.1	59	12	85.0	82.5	86.1	83.5
†28HE-W-8	59	1985	1726	16.6	2403	231.0	67	12	85.2	82.6	86.1	83.5
†28HE-W-9	67	2249	1956	18.8	2718	257.9	75	14	85.3	82.7	86.1	83.5
†28HE-W-10	75	2513	2185	21.0	3033	284.8	83	14	85.4	82.8	86.1	83.5
†28HE-W-11	83	2776	2414	23.0	3348	311.7	91	14	85.5	82.9	86.0	83.5
†28HE-W-12	91	3040	2643	25.5	3663	338.6	99	14	85.6	83.0	86.0	83.5
†28HE-W-13	98	3304	2873	27.5	3978	365.5	107	14	85.6	83.0	86.0	83.5
†28HE-W-14	106	3567	3102	29.5	4293	392.4	115	16	85.7	83.1	86.0	83.5
†28HE-W-15	114	3831	3331	32.0	4608	419.3	123	16	85.7	83.1	86.0	83.4
†28HE-W-16	122	4095	3561	34.0	4923	446.2	131	16	85.7	83.2	86.0	83.4
†28HE-W-17	130	4358	3790	36.5	5238	473.1	139	18	85.8	83.2	86.0	83.4
†28HE-W-18	138	4622	4019	38.5	5553	500.0	147	18	85.8	83.2	86.0	83.4

(Note 1) Important ordering information
(†) Add prefix for type of fuel to be burned. "LO" for Light Oil, "G" for Gas or "GO" for Gas/Oil.
(Note 2) Net I=B=R Water Ratings are based on an allowance of 1.15.
(Note 3) Light Oil having a heat content of 140,000 BTU/Gal.
(Note 4) Gas having a heat content of 1,000 BTU/Cu. Ft., 0.60 specific gravity.

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ASME H

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Smith
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